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## Vegetable Growers' News Letter

## 1937


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NEWS LETTER

Issued by
The Maryland Vegetable Growers' Association
W. R. Ballard,
Secretary-Treasurer.

Vol. XIV. No. 1. College Park, Maryland. January, 1937.

The Annual Meetings. The difficulty of competing with several other organizations in which members are interested meeting at the same time was particularly apparent at the first session of the Vegetable Growers' Association. The attendance at the second session, however, was much better, and the interest manifested quite gratifying.

An effort will be made to have the papers printed as early as possible so that members may have the information at hand in printed form.

Dr. Cordner gave the results of recent work in testing varieties of vegetables and gave recommendations as to the selection of the best standard sorts and suggestions as to new sorts worthy of trial.

Mr. Burdette presented results of studies being conducted of the fruit and vegetable distributing points in Baltimore City. In the discussion which followed, the sentiment was expressed that the University of Maryland should lead in a movement to improve conditions both as to securing adequate facilities and as to changing methods in methods.

Dr. Cory discussed some of the newer insecticides and made recommendations as to their proper use.

Dr. Jehle reviewed the work which had been done in the testing of various methods of securing and maintaining disease free stocks of seed potatoes. He also exhibited and described a number of new and promising varieties of potatoes recently distributed by the U. S. Department of Agriculture.

Unfortunately Dr. Zimmerley of the Norfolk Station was unable to be present to present the results of experiments in Fertilizer Placements, but his place was ably filled by Dr. Parker of the same Station. The data in general seemed to support the ideathat fertilizers placed in bands along the side of the row gave better results than when placed below the seeds. This seemed to be particularly true in dry seasons, because of the detrimental effect of fertilizers placed below the seed on germination.

Dr. Thomas discussed the various methods of determining soil needs through the chemical testing of soil samples. He emphasized, however, the necessity of having as much supplementary information as possible before making recommendations. He stated that it was essential to know the locality so that sample could be related to a particular soil series. It is also desirable to have information as to the crops previously grown of the particular field in question and as to previous practices in fertilization. Knowledge of the proposed crop to be grown was also essential.

The same officers were re-elected for 1937 with the exception of President, this place being filled by Mr. H. J. W. Rayner, of Salisbury.

The Auditing Committee, Mr. Charles H. Twining and Dr. H. B. Cordner, approved the Treasurer's report.

In brief the report is as follows:

| | | |
|---|---|---|
| On Hand, January 1, 1936 - - - - - - - - - - - | $41.38 | |
| Received from dues, - - - - - - - - - - - - - - | 42.00 | |
| Disbursed, dues to Farm Bureau - - - - - - - - | | $20.00 |
| Expense of Speakers at Annual Meeting - - - | | 6.25 |
| Printing, - - - - - - - - - - - - - - - - - - - | | 9.00 |
| Postage, - - - - - - - - - - - - - - - - - - - | | 1.65 |
| | $90.25 | $36.90 |
| Balance as of December 31, 1936. - - - - - - - | | 53.35 |
| | $90.25 | $90.25 |

Suggestions were made by some of the members as to how the Association could be built up and membership be made more worthwhile. It is hoped that plans can be worked out in the near future for carrying some of these suggestions into effect.

Disease Resistant Seeds. If you are looking for strains of vegetable seeds resistant to some of the diseases you should secure a copy of an excellent report issued by the U. S. Department of Agriculture through the cooperation of the Extension Service and the Bureau of Plant Industry. The report is entitled SOURCES OF DISEASE-RESISTANT VEGETABLES AND FLOWER SEEDS, 1936. The types covered in this report include asparagus, beans, cabbage, celery, lettuce, muskmelons, cucumbers, peas, pumpkin, spinach, sweet corn, squash, tomato, and watermelon.

Flowers listed are asters, and snapdragons.

This is a contribution from the office of R. J. Haskell, Extension Plant Pathologist, Washington, D. C. Workers in the Division of Fruit and Vegetable Crops and Diseases, Bureau of Plant Industry, assisted in the compilation.

Cordner Leaving. It is with regret that we have to announce that the Horticultural Staff of the University is losing one of its best workers in the field of vegetable culture. Dr. H. B. Cordner is leaving the last of the month to take aposition with the Oklahoma Agricultural College and Experiment Station, at Stillwater. The good wishes of his co-workers and no doubt of those also who have had contact with Dr. Cordner in the field, will go with him to his new field of activity.

Canning Crops Conference. February 24 and 25 have been tentatively set for the Canning Crops Conference at the University of Maryland. When the program is available, copies will be sent to members. Many of the talks and discussions will no doubt be of interest to market gardeners, as well as to those producing crops for the canneries.

Warm Up Your Potatoes. Growers who plant late home grown Irish Cobbler seed stock should raise the temperature of the storage quarters at this time according to Dr. Jehle. His tests show that if the potatoes are kept at a temperature of 60 degrees F. from the middle of January until planting time, that they will be as early and yield as well as northern grown seed.

## THE MARYLAND VEGETABLE GROWERS ASSOCIATION

Wednesday, January 13th, 9:30 A. M.

Wm. P. Hotton, Presiding,

W. R. Ballard, Secretary.

| | | |
|---|---|---|
| 9:30 | Call to Order, - - - - - - - - - - - - - | President. |
| 9:35 | Vegetable Variety Trials in Maryland, - - - - - - - - - - - - - - - - | H. B. Cordner, University of Maryland. |
| 10:20 | The Wholesale Fruit and Vegetable Markets of Baltimore City,- - - - - - - - | Roger F. Burdette, University of Maryland. |
| 11:05 | Use of Rotenone and Pyrethrum in the Control of Vegetable Insects, - - | E. N. Cory, University of Maryland. |

Appointment of Committees.

Thursday, January 14th, 9:30 A. M.

Wm. P. Hotton, Presiding,

W. R. Ballard, Secretary.

| | | |
|---|---|---|
| 9:30 | Studies on the Late Seed Potato Crop, - - - - - - - - - - - - - - - - | R. A. Jehle, University of Maryland |
| 10:15 | Fertilizer Placement,- - - - - - - - - - - - | H. H. Zimmerley, Director, Va. Truck Experiment Station |
| 11:00 | Information on Lime and Fertilizer Needs of Truck Soils,- - - - - - - - - - - | R. P. Thomas, University of Maryland |

Report of Committees.

W.R.B.

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Report of Committees.

NEWS LETTER

Issued by
The Maryland Vegetable Growers' Association
W. R. Ballard,
Secretary-Treasurer.

Vol. XIV. No. 2. February, 1937.

## The Canning Crops Program

Programs for the Canning Crops Conference sponsored by the Experiment Station and Extension Service, in cooperation with the Tri-State Packer's Association are now being distributed, copies are being enclosed with this letter. Some of the topics to be discussed are of general interest and members are invited to attend the sessions.

## Still Seeking New Insecticides

Research workers are still looking for improvements in the chemicals used for destroying insect pests. Three or four of the thousand or more substances know to have insecticidal value, give promise of being valuable in the farmer's fight with his insect enemies.

"The most promising of the departments newest insecticide discoveries", according to Lee A. Strong, Chief of the Bureau of Entomology and Plant Quarantine, U. S. Department of Agriculture, "is phenothiazine, a compound of carbon, hydrogen, nitrogen and sulphur that is easily prepared by combining diphenylamine -- a common aniline derivative -- and sulphur. So far this substance has given better results in the relatively dryer Northwest than in the Midwest and East." Further studies need to be made before its desirability for general use can be determined.

Because of rapid vaporization of nicotine in combination with soap, Bordeaux mixture, or lime sulphur, this substance has been of little use as a stomach poison. Attempts are being made to lock up a nicotine compound with various substances so that it will remain poisonous for some time.

Bentonite -- a natural clay of volcanic origin, found in Wyoming, California, and other nearby states -- can be made to unite nicotine by mixing it with a salt of nicotine, such as the sulphate dissolved in water. Sprayed on foliage, this suspension of nicotine -- containing clay eventually dries to a fine dust that kills the larvae of codling moth feeding there. This has been recommended particularly for spraying early apples.

Combinations of nicotine with peat are also being tried. Mixing free nicotine with peat in water produces a chemical reaction, consisting of the combination of the acid constituents of the peat with nicotine, which is alkaline, to form two products -- nicotine peat, which is insolable in water, and nicotine humate, which is soluble in water. Nicotine peat contains up to 13 per cent of nicotine.

crops can be allowed to stand longer before being plowed down so as to secure as large a quantity as possible of plant refuse. Two or three weeks should elapse after turning under cover crops before planting other crops. Growers could well afford to try out this method, where manure supplies are inadequate and cover crops must be relied upon to keep up the organic content of the soil.

## Good Seed

Good seed is often expensive when only cash outlay is considered, but in relation to yield and quality of crop secured, the best seed may be relatively the cheapest. In rating seed as good, many factors must be considered. First of all comes the question of whether the variety is adapted to the particular soil, market, or climatic condition. Viability or the percentage of germination, is an important factor. Resistance to certain diseases may make all the difference between success and failure. Freedom from diseases, particularly those carried on the surface or inside the seed, in certain cases, go a long ways toward insuring a crop.

Some growers fail with good seed because they do not appreciate the other factors which determine yield. If the soil is unsuitable either because of improper physical condition or becuase of lack of fertility, plants from good seed can not be expected to perform satisfactorily. Then, too, if soil is infected with diseases which live over in the soil, this might nullify any benefit which might otherwise have been secured from the use of high grade seed. The most successful growers are often those who watch every factor which may influence production and quality.

NEWS LETTER

Issued by
The Maryland Vegetable Growers' Association,
W. R. Ballard,
Secretary-Treasurer.

Vol. XIV. No. 3. March, 1937

Reorganization. At a recent meeting of the Executive Board called by President Rayner, considerable discussion was devoted to ways and means of building an organization to better serve the interests of the vegetable interests of the State. Because of the peculiar situation of conditions and developments, it appears that it might be desirable to develop regional groups with activities suited to each section. Where local organizations are already functioning, some arrangements for affiliation might be made.

No definite plans have as yet been made for reorganizing the Association and the officers would welcome a free discussion on the part of the membership. If you have in mind any changes in the present set-up which seems to you desirable, drop a line to the Secretary.

It seems desirable to maintain affiliation with the Farm Bureau Federation and to have at least one session at Baltimore in connection with the Annual Meetings. This meeting could be devoted largely to business and legislative matters with some live speaker to make the principal address. Sectional meetings could be held where papers on cultural topics could be presented. Field days, and sectional shows could be developed to be sponsored by the Association.

Among other things we need a live membership committee made up of real growers who should take over the responsibility of building up the membership.

The County Agents have been asked to furnish a short list of growers in their respective counties who might be induced to join provided the organization had enough to offer to make it worth their while. In this matter it will be appreciated if the present membership will send in the names of neighboring growers who might be interested in the Association.

This News Letter might be enlarged and it could well be made more valuable if the members would indicate the kind of information and help they would like to have.

NEWS LETTER

Issued by
The Maryland Vegetable Growers' Association,
W. R. Ballard,
Secretary-Treasurer.

Vol. XVI. No. 4. April, 1937

From Whence the Potato? The Journal of the Royal Horticultural Society (London) in its issue of February, 1932 contains a very interesting and instructive discourse on the origins of the cultivated potato.

The following notes are extracted from this article.

Reference is made to various writers who have written of the history and development of this most important food crop. Especial attention is given to the results of two Russian explorers who made three expeditions to the Americas between 1926 and 1932.

These workers believe that there existed two important centers in South America where the potato was cultivated long before the Spanish Conquests. One of these centers was in the Bolivian and north Peruvian Andine plateaus and the other in the island of Chiloe and the neighboring mainland of Chile. The first area lies in the high altitudes of the Cordillera, within 20 degrees of the Equator, where the days are short, soil is poor, and the rain often scanty. In the temperature regions of Chile the days during the growing season are long, the soil rich, and the rainfall excessive.

These Russian investigators believe that the potatoes grown in these two areas belong to distinct species, and that the cultivated potato of Europe and North America is derived from Solanum tuberosum, the Chilean type.

While all the conclusions of these workers are not accepted by all, very important contributions have been made to the knowledge of the potato, particularly to the fact that both frost and blight resistant species have been found and these qualities will no doubt soon be bred into our cultivated varieties.

While the potato was cultivated only in South America, recently solanum species have been discovered as far north as Colorado. Mexico seems to be particularly rich in wild forms and while the wild tubers were sometimes eaten, there is no evidence that the natives cultivated them for food.

With the collection of all these new forms, one would be rash to predict the possibilities in the improvement of this important food crop. It does not take much imagination, however, to envision decided changes in the near future.

The 1937 Potato Improvement Program. Various departments of the University of Maryland, working with the potato, have outlined their program of investigations and demonstrations for 1937.

Research will include testing of new seedlings developed by workers in the United States Department of Agriculture for their value for late planting at elevations less than 1000 feet above sea level; lime and fertilizer experiments; seed stock development and maintenance; improvement by breeding; variety tests; comparison of seed stocks; spraying investigations; and storage studies.

Demonstrations will be made to show: (a) the value of certified seed, (b) the value of the varieties Warba and Houma in comparison with Irish Cobbler, (c) the value of Katahdin as a medium late variety, (d) the value of Chippewa in comparison with Irish Cobbler and Katahdin, (e) the value of the Tuber Unit seed plot as a source of certified seed, (f) seed treatment, (g) standard fertilizer practice, (h) tuber moth control, (i) spraying and dusting, and (j) marketing methods.

For the Home Garden. The Wisconsin Sweet peas and Aunt Mary's sweet corn are recommended as high quality varieties for home use. Paul Work, in MARKET GROWERS' JOURNAL says that "Honey Cream is the watermelon sensation of the season." This variety is very early, rather small -- 10 to 12 pounds, nearly round, medium green with darker stripes, and has lemon yellow flesh of fine texture, very crisp, sweet and juicy.

To Reorganize or not to Reorganize. There is a feeling on the part of some of the officers of the Association that the organization should be broken down into sectional units in order to function more effectively. We need the counsel of all the members in working out a satisfactory basis for reorganization. Thirteen replies have been received from a questionnaire sent out to county agents. Most of these include a small list of leading vegetable growers in their respective counties. Perhaps the following brief comments will give you some idea of their reaction to the question of reorganization.

Allegany County. Would prefer a county unit of all vegetable and small fruit growers. Would like a winter school, and perhaps a summer tour to some other section in addition to the annual meetings held in Baltimore.

Anne Arundel County. Like the County Unit idea with a coordinating county to work with those from other sections. They have a fairly strong local organization-The Anne Arundel County Farmers' Association, which is largely a purchasing unit.

Baltimore County. Now have two well organized local associations. Might be able to develop some scheme for affiliating with our Maryland Vegetable Growers' Association.

Carroll County. Grow mostly for canners. Would prefer a sectional setup.

Dorchester County. Sent in list of growers, but made no comment on organization.

Frederick County. Not enough growers for a county unit so would prefer a sectional setup.

Kent County. Tomatoes, canning corn, and asparagus are grown as side-lines to grain and livestock farming.

Prince George's County. Would prefer a sectional group but this could not be developed around a single commodity. There is now one local organization around Washington, D. C. which includes both Maryland and Virginia growers.

NEWS LETTER

Issued by
The Maryland Vegetable Growers' Association,
W. R. Ballard,
Secretary-Treasurer.

Vol. XIV. No. 5. College Park, Maryland. May, 1937

Spray Residue on Vegetables. Secretary Wallace has announced that the lead tolerance of 0.018 grains per pound will remain in effect during 1937 and until further notice. The tolerance for arsenic (expressed as arsenic trioxide) and fluorine are in each instance 0.01 grams per pound.

The Pure Food Bill under consideration in Congress, contains certain provisions which appear to work undue hardships upon producers of fruits and vegetables. Representations are being made to those charged with the responsibility of steering this bill through the mazes of congressional activities, which, it is hoped, will eliminate the more objectional features.

Manufacturing Manure in the Field. Investigators have been searching for the substitute for the rapidly diminishing supply of manure. It now appears that the method is in sight but awaits its adaptation to the exigences of vegetable growing.

The procedure is based upon the fact that plant refuse undergoes the process of decay by the action of organisms. In order that these organisms may work rapidly and effectively, there must be moisture present, suitable temperatures, a neutral or slightly alkaline reaction, and the factor which has recently been brought into prominence, the presence of ample supplies of nitrogen.

Heretofore, growers were warned to plow down green cover crops before they attained so much growth that they became woody, the idea being that this bulky material decayed too slowly and left air pockets sothat the soil dried out badly.

The newer idea is to get all the growth possible, and to apply nitrogen and lime just ahead of the plow. This cellulose material would then decay quickly releasing the fertilizing elements for the new crop.

Because cyanamid contains both hitrogen and lime, it is being advocated as the ideal material for this purpose. Five hundred pounds per acre, costing about eight dollars, is recommended. This material is quite caustic and it is desirable to wait about three weeks before planting other crops on the land. This caustic property, however, may have very beneficial results in killing weed seeds and injurious soil organisms.

Apparently the product secured from this treatment of plant refuse, gives the same results as an equal quantity of manure. In fact some investigators go so far as to say that manure contains no element not found in this substitute.

The problem for the vegetable grower is to find a time when newly prepared land can lie idle three weeks for the caustic effects of the cyanamid to become dissipated. Certainly the method appears promising enough for extensive tests on the part of growers.

Virus Diseases of Peas. Mosaic and other virus diseases of peas appear to be quite prevalent on the Eastern Shore and in certain parts of Western Maryland. These diseases affect clover and alfalfa and winter over in them. When the pea aphis is bad, as it is this year, these virus diseases are easily carried by the aphids (Plant lice) from clover and alfalfa to the peas. This probably accounts for the fact that these diseases are worse this year than usual. It was once thought that the virus diseases could be carried in the seed of peas, but more recent investigations seem to disapprove that theory. For control, plant the peas as far from clover and alfalfa as possible.

NEWS LETTER

Issued by
The Maryland Vegetable Growers' Association,
W. R. Ballard,
Secretary-Treasurer.

Vol. XIV. No. 6. College Park, Maryland. June, 1937

New Lettuce. The U. S. Department of Agriculture is attempting to develop strains of head lettuce which are better adapted to warm regions than those now in the trade. Preliminary tests of some of these strains are now being conducted in cooperation with selected growers in different parts of the country. One of these strains, Columbia No. 1, was tested this spring by John Ward, Randallstown, Maryland, in comparison with the "New York" or "Wonderful" variety. Both Mr. Ward and Dr. Ross C. Thompson of the Agriculture Department were well pleased with this first season's test. The Columbia No. 1 produced good, firm, large heads of excellent quality. The season has been rather favorable for lettuce and it will be interesting to note the performance of this strain in seasons when the temperatures run higher.

Root Stimulants. Dr. P. W. Zimmerman and Dr. A. E. Hitchcock of the Boyce Thompson Institute for Plant Research, Yonkers, New York, have been experimenting with "growth promoting substances" with particular reference to inducing the formation of roots on cuttings of various plants. Several chemicals have been found which seem to speed up the root-forming process. It is quite probable that some substances will give better results with particular plants than with others. Much work yet needs to be done before growers will have a reliable guide to their use.

Hormodin "A" is a commercial preparation of these growth promoting substances which is now being distributed by Atkins and Durbrow, Inc., New York. The material is manufactured by Merck & Co., Inc.,

As far as information available goes the use of these substances has been limited to rooting cuttings. Whether the germination of seeds will also be stimulated or not will no doubt be subjected to tests in the course of time.

Frozen Vegetables. The development of methods for freezing vegetables bids fair to stabilize both markets and production. So far only certain vegetables have given satisfactory results.

All varieties of spinach seem adaptable as well as certain varieties of snap beans such as Asgrow, Burpee, and Landreth Stringless Greenpods, and Stringless Green Refugee.

Golden Bantam sweet corn has been frozen successfully.

Growers interested in this subject should secure from the Frozen Pack Laboratory of the U. S. Bureau of Chemistry, Spokane Street Terminal, Seattle, Washington, a prelimnary mimeographed report of results secured from experimental tests.

Sanitary Measures. Growers are having increasing difficulties in their fight against diseses. The grower of the future will no doubt be compelled to consider more carefully careful sanitary measures in addition to spray and dust programs. Rotation of crops is one of the time-honored methods still in vogue and more important than ever before.

Recent information that many virus diseases (and others) are carried over on common weeds emphasize the need of greater attention being paid to the extermination of these offenders not only from the fields but also from fence rows and from neglected corners around buildings and lots.

Sterilization of soils through the use of steam, chemicals, and by other means are being emphasized by research workers.

In these modern times of keen competition, slip-shod methods will not work, and good management includes all the means available for protecting plants from their enemies.

Pea Meeting at Ridgely. At the meeting of canners, seed representatives and pea growers on the Ridgely Station farm, several items of interest to pea growers were noted.

The peas grown in this section, which are mainly of the variety Alaska, are grown close to fields of clover and alfalfa. The "green fly" or aphid winters over on the clover and early in the season spreads to the peas. The infestation was bad this season, and spraying had to be done.

Agicide spray which is a rotenone, derris, preparation was found to be quite effective and easy to apply, vaporized nicotine was also used and found effective. Where no spraying had been done the dwarfed vines and shrunken pods showed the debilitating influence of the pest.

Fertilizer plots are always interesting and an effort had been made this season to demonstrate the value of cyanamid when applied with can house refuse such as corn husks and cobs, and plowed under.

Three hundred to five hundred pounds of the cyanamid when applied either in the fall or spring and plowed under with the refuse matter, made a good showing the peas being dark green in color, with good vines.

The interest in Cyanamid as a fertilizer for peas, was stimulated by a remarkable increase in the growth, the season of 1934 when applied to a plot of land upon which peas had been grown annually for several seasons, and the previous season had failed because of a bad infection of "root rot". Five hundred pounds per acre of Cyanamid applied after plowing in early December made a remarkable increase in growth and yield. An inspection of the vines showed less damage from root rot on the treated plots.

Cyanamid is caustic when fresh and will injure plants if it comes in contact with the roots, but applied to the soil ahead of the seeding or setting at the rate of one week to each hundred pounds of the material used it is quite safe. One important advantage it possesses over other forms of nitrogen is that it does not leack out of the soil as readily as most of the other commercial forms of nitrogen.

The almost entire absence of mixtures and "rogues" in the stocks of peas supplied by seedsmen to canners shows that good supervision is being given to the seed stocks.

Some small seeded varieties of wrinkled sweet flavored peas are showing promise of being suitable for culture on the Eastern Shore. Wisconsin Early Sweet and Mardela are two of this groups which are quite promising. Early Dark Podded Thomas Laxton is a larger variety, quite early, and should be of interest to growers of peas to sell by the basket in the city markets.

----Thos. H. White.

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The Maryland Vegetable Growers' Association,
W. R. Ballard,
Secretary-Treasurer.

Vol. XIV. No. 7. College Park, Maryland. July, 1937.

## The Annual Report

The annual report is printed at last and is being mailed out to paid up members. If you do not receive a copy, you may not have paid dues for 1937. If you have not, send in your dollar and the report will be sent you. If for any reason paid up members do not get the report, let the Secretary know and the error will be corrected.

## Getting Plants Up Out of the Dirt

Members will no doubt find it of considerable interest to follow the work now being carried on on the farm of Mr. Max Miller on Peach Blossom Creek near Easton. This is an attempt to adapt to Maryland conditions the system of water culture devised by Dr. Gericke of California.

Mr. Miller has a series of 200 concrete tanks, 36 ft. long. Some of these are 3 feet wide while others are 6 feet. Wire frames set down over the tanks in which excelsior and saw dust are placed, into which seeds or plants are set. The roots extend down below into the nutritive solution which is kept circulating through the tanks by a pumping system.

Tomatoes form the main crop being grown but many other vegetables and a few flowers are being tested.

Plots shaded by muslin cloth appear to be in better condition than those exposed to direct sunlight. It is too early to determine how successful the method will be under Eastern conditions, but in California large yields have been produced by the method.

If the system proves of sucdes under greenhouse conditions, it may eliminate the big job of carting in and out large quantities of soil for the beds.

The nutritive solution used is, of course, in quite a dilute concentration. Growers generally do not appreciate how little material plants really take from the soil, and this only in soluble form. Large quantities of water are absorbed by the roods but relatively small amounts of minerals are used.

If a plant is dried and burned, the ashes remaining represent in a large measure the material taken from the soil. The bulk of the plant structure comes from the carbon dioxide of the air, and represents organic compounds manufactured in the plant through the action of sunlight on the green coloring matter in the leaf.

## Green Wrapped Tomatoes

This industry has assumed considerable proportions especially on the Eastern Shore and is generally fairly profitable. Some growers ship green fruits as long as the price holds up then patronize the cannery to handle the remainder of the crop.

No doubt there is much to be said in favor of marketing these tomatoes before they are fully ripe, but there is some complaint on the par t of consumers that these fruits are tough and tasteless and for these reasons prefer the perfectly ripened greenhouse product.

It would be interesting to see whether growers might not satisfy their customers better if they could agree to withhold shipping until the tomatoes had reached a greater degree of ripeness. While not quite on a par with the green cantiloupes which used to plague the markets, the consumers have a just complaint against the quality of the green wraps.

## Analyzing The Soil

Various methods have been used at various times for determining the fertilizer needs of various crops. At one time the analysis of the crop itself was considered a guide as to what should be applied to the soil.

The composition of the soil itself has, in the popular mind, been a criterion as to fertilizing practice.

More recently soil students have concluded that not the total nutrients but only those available to the plant together with factors which might continue the process of making food elements available, were important. With this in mind methods of determining availability of the various elements have been perfected and the Soils Depar tment at the University of Maryland has conducted a widespread campaign to get farmers to utilize this service. The growing demand for these services indicate that the growers are learning to appreciate the value of such tests.

In order to make a correct diagnosis, however, it is highly desireable to have at hand any contributing information of impor tance. This is particularly true of historical data with regard to previous use of the land. The crop, or crops, to be grown should also be taken into account.

Since the soils of the entire state have been surveyed and classified the potentialities of the soil on a given farm are readily obtained from the soil maps.

It should be kept in mind, however, that soils are only one factor in the successful culture of a given crop. Adaptation of variety to climate, time of planting, rainfall, cultural care, control of insects and diseases, and the vagaries of climate, all have a bearing on the end result.

The, from the growers standpoint, successful production, while satisfying in itself, must have a profitable sale to make farming a success. With all these factors to contend with it is little wonder that farm people as a group are inclined to be more or less conservative.

NEWS LETTER

Issued by
The Maryland Vegetable Growers' Association,
W. R. Ballard,
Secretary-Treasurer.

Vol. XIV, No. 8. College Park, Maryland. August, 1937

Cover Crops and Nitrogenous Fertilizers as Substitutes for Manure in Tomato Production. The Maryland Experiment Station started an experiment in 1936 to obtain information on various types of cover crops disced under in the fall with cyanamid as affecting tomato yields the following year (1937). The entire area had a rye cover during the winter of 1935-1936. Plots of each of the following treatments were provided for: (1) Rye planted in the fall of 1935 let remain through the spring and summer of 1936. (2) Weeds let grow. (3) Broadcase corn planted. (4) Sudan grass planted. (5) Cowpeas planted. (6) Tomatoes planted followed by rye, after fall discing.

In the fall of 1936 the entire area was deeply disced and one-half of each plot was given an application of cyanamide at the rate of 500 pounds per acre. The other half of each plot received no fall application of fertilizer.

During the winter of 1936-1937 two plots had rye -- No. 1, listed above and No. 6. The No. 1 treatment reseeded itself and provided a heavy cover of rye, which came up after the cyanamide had been disced under. In this case the cyanamide did not seem to harm the seeds. It should be remembered, however, that planting seeds at the same time as applying cyanamide is not to be recommended.

Tomatoes were transplanted to all plots early in May and their growth has been closely watched. Observations indicate that the poorest plots are those (1) which were planted to tomatoes last year, and (2) which had rye as a cover in the winter of 1936-1937. In the first case we would not expect tomatoes following tomatoes to do well. In the second case, however, the explanation must lie in the fact that the decomposition of rye plowed under in the spring is accompanied by a nitrogen deficiency brought about through the use of nitrogen by soil organisms in decomposing the rye. If such were the case, then we might expect that by adding more nitrogenous fertilizer, the trouble could have been avoided.

The vines on the half of each plot receiving cyanamide are at this time darker green, with heavier foliage covering the fruits than on the half receiving no cyanamide. Yield records are being taken and the grades, as well as total yields from the various treatments will be determined at the end of the season, and reported in the News Letter.

- - -

Truck growers interested in watermelons should visit the watermelon variety trials, conducted by the Extension Service and Department of Agriculture, near Salisbury. County Agent J. P. Brown in Salisbury should be contacted in regard to this work. Sweet potato variety trials are also being conducted on the same farm.

A great many factors influence the length of time during which various vegetables may be stored and kept in edible condition. However, a valuable summary as to recommended storage conditions and approximate maximum storage period for vegetables is given in New York (Cornell) Bulletin 602 as follows:

| Vegetable | Temperature Degrees F. | Relative Humidity Percent. | Maximum Storage Period. |
|---|---|---|---|
| Asparagus. | 32 | 95 - 98 | 12 days. |
| Beans, snap, | 40 | 90 - 98 | 12 days. |
| Beans, Lima, | 32 | 90 - 95 | 2 - 3 weeks. |
| Beets, | 32 - 40 | 90 - 95 | 4 - 5 months. |
| Broccoli, sprouting, | 32 | 95 - 98 | 10 days. |
| Brussels Sprouts, | 32 | 95 - 98 | 2 months. |
| Cabbage, | 32 - 40 | 90 - 98 | 5 months. |
| Carrots, | 32 - 40 | 90 - 95 | 6 months. |
| Cauliflower, | 32 | 90 - 98 | 30 - 40 days. |
| Celery, | 32 | 90 - 98 | 3 - 5 months. |
| Cucumbers, | 32 - 40 | 95 - 98 | 4 - 5 weeks. |
| Eggplant, | 32 | 90 - 95 | 3 - 4 weeks. |
| Kale, | 32 | 95 - 98 | 1 month. |
| Lettuce, | 32 | 95 - 98 | 3 - 4 weeks. |
| Muskmelons, mimmature, | 50 | 80 - 90 | 2 weeks. |
| Muskmelons, mature, | 32 | 80 - 90 | 1 month. |
| Onions and onion sets, | 31 - 32 | 80 - 95 | 5 months. |
| Parsnips, | 32 | 90 - 95 | 5 months. |
| Peas, green, | 32 | 95 - 98 | 2 weeks. |
| Peppers, | 32 | 95 - 98 | 40 days. |
| Pumpkins, | 40 | 50 - 70 | 2 - 3 months. |

NEWS LETTER

Issued by
The Maryland Vegetable Growers' Association,
W. R. Ballard,
Secretary-Treasurer.

Vol. XIV. No. 9. College Park, Maryland. September, 1937.

Maryland Loses Another Vegetable Man. Dr. W. A. Frazier, who has had charge of investigations relating to canning crops, is severing his connection with the University of Maryland to take up research work with vegetables at the Experiment Station at Tucson, Arizona. He will assume his new duties on the first of November. The first year will be given over to getting first hand information regarding the vegetable industry of the state in order to determine the most pressing problems demanding solution.

The best wishes of Dr. Frazier's many friends and co-workers will go with him in his new field of activity.

Weather and Management. These are two factors in the vegetable business subject to wide fluctuations. Unfortunately little can be done about the weather. In the field of management, however, the grower has an opportunity to make substantial savings which may spell prosperity. The old idea that any one can succeed at farming is not true in these modern days (if it ever was). It requires a keen, level head to determine the best method of fertilizing and handling soils, to keep up with the latest and best varieties of vegetables, the most thorough and efficient control of insects and diseases, and to follow the vagaries of market conditions. Efficient use of labor is a very important factor which greatly influences net returns. The cost of machinery remains high yet good judgment is needed to determine when the purchase of new equipment is justified.

It is well to map out a fairly definite course in a long time plan, but weather and other factors make emergency adjustments necessary and the grower needs to size up the situation quickly and make wise decisions to save as much lost motion as possible.

How to Color Your Carrots. A recent publication from Cornell University reports results in studies on EFFECTS OF SOME ENVIRONMENTAL FACTORS ON GROWTH AND COLOR OF CARROTS.

A good strain of Chantenay carrots were grown in the greenhouse under controlled conditions. Special emphasis was placed on temperature, soil moisture, and length of day as affecting growth and color.

Plots were grown at temperature ranges of 40° to 50°, 50° to 60°, 60° to 70°, and 70° to 80°. At the higher temperatures the roots became shortened so they were shaped more like Ox-heart. When temperatures were lowered, roots became longer and more pointed like Long Orange. This tendency to increase in slenderness was most marked at 40° to 50°. Roots subjected.

to fluctuating temperatures with cool conditions at night were of about the same shape as those at constant midway temperatures, which indicates that the shape of the root is governed by the average temperature rather than by the range.

In the study of soil moisture as a factor, carrots were smaller and more tapered at the end under low soil moisture than those grown under a medium or high soil moisture.

As the length of day was increased, the length of the top of the plant increased slightly but the root shape was not altered.

The best color was obtained at 60° to 70° while low soil moisture seemed to give better color than high moisture content.

Length of day apparently has little influence on the color of the carrot root.

Carotene, which is the substance which gives the yellow color to the root increases markedly from the time of planting for about 100 days, after which there was only slight change. Carrots grown in the South for shipping to northern markets in winter and spring are always pulled when relatively young and small, and this undoubtedly explains their poor color. In the North, all bunching carrots and many of those intended for topping and selling in bushel lots, are harvested before they have reached the age for maximum carotene content.

Total sugars remained practically constant throughout the season, but there was a change in form, as is shown by an increase in sucrose and a decrease in glucose as the season advanced. Sucrose is sweeter than glucose, and therefore the carrots increased in sweetness as they increased in age.

Old carrots lost much less weight in storage than did young carrots, and less weight was lost with both at 32° than at 50°.

Bulletins. STORAGE OF SWEET POTATOES is the title of the revised edition of the U.S.D.A. Farmers Bulletin No. 1442. This discusses not only the construction of suitable storage houses, but also the requirements for successful storage. Storage of sweet potatoes in pits or banks is outlined as practiced in the southern states.

Farmers Bulletin No. 847, POTATO STORAGE AND STORAGE HOUSES, discuss methods of handling the Irish potato and may be helpful to those seeking information on the subject.

DISEASES AND INSECTS OF GARDEN VEGETABLES, is a handy publication to have at hand for ready reference. This is Farmers Bulletin No. 137.

For the home gardener, Farmers Bulletin, No. 1673, THE FARM GARDEN, would be found helpful.

Leaflets on the culture of certain vegetable crops have been issued during 1937 by the U. S. D. A. as follows:

Leaflet No. 125 — PRODUCTION OF CARROTS.
Leaflet No. 126 — RHUBARB PRODUCTION.
Leaflet No. 127 — THE CULTURE OF TABLE BEETS.
Leaflet No. 128 — PRODUCTION OF SPINACH.

NEWS LETTER

Issued by
The Maryland Vegetable Growers' Association,
W. R. Ballard
Secretary-Treasurer.

Vol. XIV. No. 10. College Park, Maryland. October, 1937.

## Some Significant Figures

The Committee on Agricultural Cooperation of the National Association of Manufacturers in a special study of Marketing the Products of Agriculture presents some interesting figures. The report is too long to review in its entirety, but under the heading, "Why Does Not the Farmer Get More or Less for His Products?" the following significant statements are made. "It appears that total volume of farm products fluctuates very much less than prices and therefore less than farm income, while per capita consumption fluctuates least of all, due in part to adjustments in seasonal inventories."

"In 1928, before the Federal Farm Board was organized, volume was 104 and the wholesale price index was 106. By 1932 the volume was still at 100, yet the price index had fallen to 48. The price collapse to less than one-half the previous level obviously was not brought about by a sudden doubling of agricultural production. During 1930-31-32, there was a world-wide collapse in buying power as unemployment increased and wages declined in response to a combination of events; prices worked down to keep in line, in order to make consumption possible."

In the light of these figures, the idea that the government can control prices by attempting to control production appears futile. To begin with growers know that controlling acreage does not necessarily control yields and if it were possible to regulate yields, this would not inevitably control prices, except, perhaps, in the case of a few commodities where monopoly conditions prevail.

One factor, too, which must always be kept in mind is consumer resistance. It is too easy these days to substitute other forms of food products, to control matters arbitrarily.

Farmers as a group are not likely to relish regimentation, and compulsion by the government is likely to meet stiff resistance.

It is of interest in this connection to note that the potato growers in 17 counties of the state voted during the week of September 20 to favor acreage stabilization as a part of the 1938 agricultural conservation program. The vote stood 594 growers in favor of the plan and 83 growers against it.

National and individual goals are to be set and growers will be eligible for special payments if they keep within their goal, or penalized if they overstep the bounds.

The plan applies only to commercial production.

## Proposed Changes at the Annual Meetings

The Farm Bureau Federation and the allied organizations have under consideration some proposed changes in the set-up of the annual meetings. If the changes should be adopted, the vegetable growers would have a morning and afternoon session on the same day instead of having two morning sessions as in the past. The Secretary would welcome any suggestions from the membership as to which plan they might favor. A decision will have to be made in the near future. It will be necessary also to set up a program for the two sessions. If the new plan is adopted, the vegetable Growers will have their sessions on Wednesday, January 12. If the plan followed in the past is adhered to, morning sessions will be held on Wednesday and Thursday, January 12th and 13th respectively.

## Search For Variety Improvement Continues

The average grower has little conception of the tremendous effort being made by seedsmen and government workers to improve the strains of vegetables. Thorough training and keen observation as well as good judgment are required of workers in this field. It is true that occasionally an observant grower may find an individual plant which shows decided improvement over the variety type yet the steady, persistent efforts of the trained specialist will be more and more needed as time goes on.

The development of a new strain or variety often involves careful crossing and recrossing of varieties, followed by patient testing and elimination, then re-selection until the new form can be depended upon to perform consistently. This must then be followed by careful testing under different climatic conditions, and on different soil types. There is still the gauntlet of market demands to be run. If it finally makes the grade, there may still be the problem of developing a dependable seed supply.

Many Seedsmen maintain extensive trial grounds and a visit to some of them to view the work in progress should be of great interest to wide awake growers.

The work of the U. S. Department of Agriculture and that of the various experiment stations includes projects with many kinds of vegetables. Pritchard's Marglobe tomato and the promising new varieties of potatoes indicate the type of progress being made by the U. S. Department of Agriculture. The Maryland Golden Sweet Potato and the Maryland Alaska shows that Maryland is keeping step with progress in other fields.

## New Maryland Bulletin

The results of the studies made by the agricultural economists on the "Marketing of Fruits and Vegetables by Motor Truck in Western Maryland" have been published in Bulletin 407 of the Maryland Experiment Station. Any member interested in this report should send in a request for a copy of the bulletin.

NEWS LETTER

Issued by
The Maryland Vegetable Growers' Association,
W. R. Ballard
Secretary-Treasurer.

Vol. XIV. No. 11. College Park, Maryland. November, 1937.

1936 Yearbook. The yearbook of the U. S. Department of Agriculture for 1936 marks a departure in form which makes it unusually interesting. An attempt has been made to sum up the progress to date in the fields of breeding farm crops and farm animals. Undoubtedly a vast amount of data has been gone over and boiled down and the most important results presented in a non-technical manner. It should be interesting reading to any one who desires to know something of the origin of strains of plants and breeds of animals with which he may be familiar. He will also gain an insight into modern methods of improvement and the trend of future development.

Vegetable growers will look forward to the issuance of the 1937 Yearbook which is reported to contemplate the whole field of horticulture in relation to plant improvement.

Preliminary Census Reports. Separate releases of the 1935 census of agriculture on particular crops are now being issued. Among other things it gives the rank for acreage in the various counties of the United States. It will perhaps interest the members to note the relative standing of Maryland counties in regard to certain important vegetable crops.

Sweet Potatoes

| County | Acreage Rank | | Production Rank | |
|---|---|---|---|---|
| | 1934 | 1929 | 1934 | 1929 |
| Wicomico | 22 | 6 | 7 | 3 |

Beans (String or Snap

| | | | | |
|---|---|---|---|---|
| Baltimore | 4 | 6 | | |
| Somerset | 15 | 19 | | |
| Wicomico | 16 | 47 | | |
| Carroll | 25 | 20 | | |
| Dorchester | 38 | 67 | | |
| Anne Arundel | 47 | 21 | | |

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|---|---|---|---|---|
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Beans (String or Snap

| | | | | |
|---|---|---|---|---|
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| Somerset | 15 | 19 | | |
| Wicomico | 16 | 47 | | |
| Carroll | 25 | 20 | | |
| Dorchester | 38 | 67 | | |
| Anne Arundel | 47 | 21 | | |

Cabbages

| | 1934 | 1929 |
|---|---|---|
| Baltimore | 26 | 20 |

Tomatoes

| | | |
|---|---|---|
| Dorchester | 4 | 1 |
| Caroline | 14 | 13 |
| Somerset | 17 | 10 |
| Worcester | 21 | 22 |
| Talbot | 22 | 21 |
| Kent | 25 | 19 |
| Baltimore | 32 | 34 |
| Queen Annes | 38 | 24 |
| Wicomico | 42 | 25 |
| Harford | 49 | 51 |

Sweet Corn

| | | |
|---|---|---|
| Harford | 4 | 3 |
| Frederick | 5 | 6 |
| Carroll | 12 | 4 |
| Baltimore | 34 | 19 |
| Talbot | 36 | 11 |

It will be seen that Maryland in 1934 had ten out of fifty of the leading tomato producing counties of the country. The rank of course varies from year to year, but Maryland has made quite a record with this crop.

Sate Potato Exhibit. Additional appropriations have been made available for prizes in the Potato Show which will be staged at the Lord Baltimore Hotel next January. Members who may be interested in exhibiting should consult the schedule of classes which accompanies this letter. It is hoped that the potato growers will respond to the invitation to exhibit so that this Maryland product may be adequately represented.

Bulletin Being Revised. Extension Service bulletin No. 70, the Small Vegetable Garden, is being revised to bring it up to date. Several new varieties appear in the lists and some additional material is being included. This bulletin is intended for general distribution to the home gardener, rather than to the commercial grower; although, some features might interest the latter group.

The Season's Record. The Federal Bureau of Agricultural Economics has just recently reported on the 1937 vegetable shipping season and notes that there has been generally a large production of most crops, with farm prices of many lines lower than those of a year ago. The prospects are for a reduced acreage in 1938. Indications are for a somewhat smaller acreage of commercial early potatoes and many of the fall and winter truck crops.

Prices of potatoes are expected to remain fairly stable for the next few months, but prices of such storage crops as sweet potatoes, onions and cabbage probably will show their usual seasonal advance between now and next spring. Most of the truck crops also may advance slightly in price, as the main sources of supply shift to the southern and southwestern producing areas.

Prices for potatoes have fluctuated, but are much lower than last season. The indicated production of potatoes for the country as a whole was reduced slightly as of October 1, when the total crop was estimated at 399,000,000 bushels. This is 69,000,000 bushels (or 21 percent) more than produced in 1936, and is about 27,000,000 bushels (or 7 percent) larger than the 1928-32 average crop. The sweet potato crop is about 11,000,000 bushels larger than in 1936 and about 8,700,000 bushels above the 1928-32 average. Production is expected to be greater than last year in each of the major producing areas.

The 1937 shipping season for truck crops has been notable for the general increase of production of nearly all crops, onions being the most important exception, a slight increase in total acreage was accompanied by relatively high yields for most crops. In consequence, prices to growers have been generally lower than those of last year, and there are definite indications of reduced acreage for the 1938 shipping season.

NEWS LETTER

Issued by

The Maryland Vegetable Growers' Association
W. R. Ballard, Secretary-Treasurer.

Vol. XIV, No. 12. College Park, Maryland. December, 1937.

Annual Meetings. The annual meetings of the Association will be held on Wednesday, January 12, 1938, with a morning and afternoon session. You are cordially invited to attend both sessions and to join the association. Any one interested in vegetables may become a member by paying the annual fee of $1.00 in advance. This will entitle him to a copy of the annual report, and the monthly news letter. The program for the annual meeting is on the reverse side of this sheet. The afternoon session will be devoted to a discussion of how vegetable growers can be organized so the Association can better serve their interests.

Do you favor the development of county or regional units, with occasional educational meetings at various points in the State? Do you believe local organizations now in existence would affiliate with the State Association if a suitable plan could be evolved? Help us to thrash out these questions at the annual meeting.

The Potato Show. Increased appropriations make it possible to enlarge the premium list for the winter potato show which will be staged on January 12th on the Mezzanine floor of the Lord Baltimore Hotel. Six prizes ranging from $3.00 to $1.00 will be offered in each of eighteen classes. There are groups for adult certified, adult commercial, 4-H Club certified and commercial, and F. F. A. certified and commercial. With the exception of two classes for sweet potatoes, the exhibit will consist of varieties of irish potatoes. An entry will consist of sixteen potatoes. Copies of the schedule may be secured by addressing Doctor R. A. Jehle, Extension Service, College Park, Maryland.

THE MARYLAND VEGETABLE GROWERS' ASSOCIATION

PROGRAM

Wednesday, January 12, 1938.

H. J. W. Rayner, Presiding,
W. R. Ballard, Secretary.

Morning Session

| | | |
|---|---|---|
| 9:30 | Call to Order | President Rayner. |
| 9:35 | The Control and Retardation of the Japanese Beetle in Maryland | George L. Langford, Univ. of Maryland. |
| 10:20 | Varieties of Vegetables Suitable for Freezing Preservation | H. C. Diehl, U. S. Dept. of Agriculture, Washington, D. C. |
| 10:05 | Disease Resistance in Vegetable Crops | C. E. Temple, Univ. of Maryland. |

Appointment of Committees.

Afternoon Session

| | | |
|---|---|---|
| 2:30 | The Organization of Vegetable Growers | Discussion led by H. J. W. Rayner. |
| | The Farm Bureau Truckers Local of Baltimore County | Richard T. Merritt, President. |
| | Baltimore County District Truckers Association | H. Treet Baldwin, President. |
| | Long Green Truckers Association | H. F. Emmel, Secretary. |
| | Anne Arundel County Farmers Association | Charles E. Hammond, Manager. |

Report of Committees.

# VARIETY TRIALS WITH TRUCK CROPS ON THE EASTERN SHORE OF MARYLAND

## 1937

W.A.Frazier and J.P.Brown

For the seasons 1935-1937, inclusive, the Horticulture Department of the Maryland Agricultural Experiment Station and the Extension Service have cooperated in truck crop variety trials on a Sassafras sandy loam soil near Salisbury,Maryland. The most promising varieties of particular crops have been planted with these ideas in mind: first, that some of the newer introductions may replace those varieties now in use, and second, that comparative yield data are needed on some of our commonly planted varieties to establish more clearly their definite values.

Data and brief conclusions for the 1937 season are presented here. Previous years' data have been summarized in mimeographed form. The present report must be considered as a progress contribution only. A complete statistical analysis of data has been deemed unnecessary for this report.

## TOMATOES

Extremely heavy rainfall during the middle of the picking season reduced yields of tomato varieties greatly. A new variety, Early Baltimore, gave the highest yield in the test this year - 8.07 tons per acre of marketable fruits. This variety is essentially a Baltimore type but is somewhat earlier than Greater Baltimore. Pritchard and Glovel also yielded comparatively well. It is probable that the heavy rainfall accounted for the poor showing of the medium late to late varieties, such as Marglobe, Rutgers, and Brown's Special. The present test offers a good example of how abnormal seasons may adversely affect yields of varieties which we recommend as being most satisfactory for our conditions.

On the basis of observation of varietal behavior in commercial fields in the past and variety trials conducted by the Maryland Station the past decade, we would recommend Marglobe or Rutgers for general purpose planting for both canning and market. For a slightly earlier tomato, Grothen's Globe will prove satisfactory, although it is highly susceptible to "netting" and concentric cracking. Pritchard will prove satisfactory on rich soils. Brown's Special does not give consistently good performance and it is unusually susceptible to blossom end rot in dry seasons.

Early Baltimore merits further trial in the Salisbury area. Glovel is a pink-fruited type, otherwise resembling Marglobe somewhat in growth habit. Pink varieties have not been popular in Maryland.

TABLE 1 - TOMATO VARIETY TEST, SALISBURY ,MARYLAND 1937

| Variety | No. Fruits Marketable | Wt. of Fruit (lbs.) | Average Wt. per Fruit | Yield, tons per acre |
|---|---|---|---|---|
| Maryland Marglobe | 1090 | 375.25 | .345 | 4.87 |
| Brown's Special | 1020 | 383.25 | .375 | 4.98 |
| Rutgers | 1522 | 454.00 | .298 | 5.90 |

(Cont'd. next page)

TABLE 1 (Cont'd.)

| Variety | No. Fruits Marketable | Wt. of Fruit ( lbs.) | Average Wt. per Fruit | Yield, tons per acre |
|---|---|---|---|---|
| Pritchard | 2170 | 591.00 | .219 | 7.68 |
| Early Baltimore | 2138 | 621.25 | .290 | 8.07 |
| Master Marglobe | 1734 | 516.25 | .298 | 6.71 |
| Glovel | 1745 | 552.50 | .317 | 7.18 |
| Grothen's Globe | 1598 | 465.50 | .291 | 6.05 |

First two columns of figures represent data from four plots combined, a total area of 1/26th acre.

## LIMA BEANS

Excellent stands of Early Grant and Dreer's Bush were obtained, with relatively poor stands of Fordhook and Early Wilson. This fact accounts partially for low yields of the latter two varieties. It is generally recognized, however, that in many seasons pod set of Fordhook and most of the large limas is unsatisfactory in the Eastern Shore area.

Yields of Early Grant and Dreer's Bush were very satisfactory in this year's trial. Pods of Early Grant were larger than any other variety in the test, while those of Dreer's Bush were smallest.

The problem of seed treatment is an acute one in this area and tests to determine whether more satisfactory germination may be obtained by seed treatment should be initiated.

The four varieties used in the 1937 trial should be compared again in 1938.

TABLE 2 - LIMA BEAN VARIETY TRIALS, SALISBURY, MARYLAND, 1937

| Variety | Lbs. Unshelled Beans | Number Pods per Pound |
|---|---|---|
| Fordhook | 58.5 | 34 |
| Early Giant | 113.5 | 27 |
| Dreer's Bush | 127.5 | 35 |
| Early Wilson | 77.5 | 30 |

Data given are for five plots combined, a total area of .031 acre. First harvest July 16. Poor stand of Fordhooks accounts for much of low yield.

## SNAP BEANS

Repeated tests in several locations in Maryland in recent years have established the superior yielding abilities of Giant Stringless Green Pod and Burpee's Stringless Green Pod. Again this year, these varieties lead in total yields. A variety being used more extensively in Maryland for canning purposes as Asgrow Stringless Green Pod. Pods of this variety are rounder and smoother than Giant Stringless or Burpee's, and in some cases are used for canning whole beans.

Differences in time of maturity for the seven varieties in the test were very slight, with Stringless Black Valentine possibly two days later than other varieties. In some seasons, Burpee's Stringless Green Pod is a day or two earlier than Giant Stringless.

Sure Crop Black Wax is a desirable wax bean for market purposes.

All present strains of Refugee beans have previously been found undesirable for planting in the trucking area of Maryland's Eastern Shore.

TABLE 3 - SNAP BEAN VARIETY TEST, SALISBURY, MARYLAND, 1937

| Variety | Lbs. Green Beans | Remarks |
|---|---|---|
| Giant Stringless Green Pod | 83.50 | Heavy early yield, good for canning |
| Burpee's Stringless Green Pod | 60.00 | Heavy early yield, good for canning |
| Asgrow Stringless Green Pod | 57.75 | High quality for canning |
| Stringless Black Valentine | 49.75 | Slightly later than other varieties. |
| Tendergreen | 55.60 | Round bean, fine quality |
| Bountiful | 47.00 | Wide, flat pod, slightly fibrous |
| Sure Crop Black Wax | 49.00 | Long pod, deep yellow color |

Data given are for four plots combined, a total area of .0124 acre. First harvest June 17.

## CUCUMBERS

As in previous years, A.& C., Clark's Special and Woodruff's Hybrid have been outstanding varieties. Colorado is the most promising recent introduction and needs further trial.

Woodruff's Hybrid in this trial lacked the green color that was present in A.& C. and Clark's Special. The fruits were slightly stubby, also. Buyers preferred A.& C. and Clark's Special.

Greenbac had the lowest number of marketable fruits. Many long, misshapen fruits were foundin this variety. It is decidedly later in maturity than the other varieties and may be discarded from the trials.

Straight - 8, although the earliest variety in the test this year, did not have the dark green color comparable, for example, to A. & C. It produced a very large number of poorly formed fruits.

TABLE 4 - CUCUMBER VARIETY TEST, SALISBURY, MARYLAND, 1937.

| Variety | No. Marketable Cukes | Wt. Marketable Cukes ( lbs.) | No.Unmarketable Cukes | Wt. Unmarketable Cukes (lbs.) |
|---|---|---|---|---|
| Greenbac | 446 | 344.0 | 431.0 | 349.25 |
| Woodruff's Hybrid | 891 | 597.0 | 499.0 | 334.00 |
| Clark's Special | 791 | 529.0 | 443.0 | 283.25 |
| A.& C. | 782 | 586.25 | 396.0 | 262.25 |
| Straight- 8 | 660 | 541.75 | 600.0 | 387.00 |
| Colorado | 670 | 565.00 | 369.0 | 262.75 |

Data given are for four plots combined, a total area of .04 acre. First harvest June 26th.

## CANTALOUPES

Fruits of Hearts of Gold were again relatively small on this light soil. The average weight per fruit for this variety was 1.95 pounds. Marketable fruits of all other varieties averaged over two pounds in weight.

Keystone Winner, a new variety of the Hale's Best type produced good quality melons of a size slightly larger than Hale's Best. The variety merits further trial.

Hale's Best No. 36 produced more marketable fruits than any other variety, with the smallest percentage of culls. The quality was good.

Superfecto produced a small number of relatively small but good quality fruits.

Bottomly, a green fleshed variety, produced fruits of relatively large size, but the quality was only fair.

TABLE 5 - CANTALOUPE VARIETY TEST, SALISBURY, MARYLAND,1937

| Variety | Number Marketable Melons | Wt.Marketable Melons (lbs.) | No. Culls | Wt. Culls (lbs) | Av.Wt. Marketable Melons (lbs) |
|---|---|---|---|---|---|
| Hearts of Gold | 182 | 354.25 | 195 | 251.75 | 1.95 |
| Bottomley | 258 | 605.50 | 106 | 140.50 | 2.35 |
| Hale's Best No.36 | 303 | 677.75 | 73 | 109.50 | 2.23 |

(Cont'd. next page)

TABLE 5-(Cont'd)

| Variety | No. Marketable Melons | Wt. Marketable Melons (lbs.) | No. Culls | Wt. Culls (lbs.) | Avg. Wt. Marketable Melons (lbs.) |
|---|---|---|---|---|---|
| Superfecto | 193 | 422.00 | 122 | 204.75 | 2.18 |
| Margold | 246 | 606.50 | 117 | 176.50 | 2.46 |
| Keystone Winner | 271 | 608.50 | 128 | 194.25 | 2.25 |

Data given are for four plots combined, a total area of .04 acre. First harvest July 24th.

## WATERMELONS

Tom Watson yielded the largest number of melons and the highest total tonnage for the past season. The melons were fairly large (21.1 lbs. average), and the quality was satisfactory.

Big Boy ranked next to Tom Watson in yield, but the melons were smaller thanfrom any other variety in the test. The quality was fair.

Commercial Stone Mountain produced relatively early fruits of a satisfactory size (22.3 lbs. average). Stone Mountain No. 5 produced fewer and smaller fruits, with quality of flesh similar to the commercial strain. This is in line with the results for 1936. Unless wilt is prevalent, the commercial strain should be grown in the Eastern Shore truck crop area in preference to No. 5.

Thurmond Gray produced the largest melons in the test. The fruits, however, were lacking in deep red color in the "heart" zone.

Kleckley No. 6 produced medium size melons of dark red flesh and good quality. This variety appears to be the most satisfactory wilt-resistant sort now obtainable for the light soils of the Eastern Shore.

TABLE 6 - WATERMELON VARIETY TRIALS, SALISBURY MARYLAND, 1937

| Variety | Number Melons per Acre | Average Wt. per melon (lbs.) | Total weight (lbs.) per acre |
|---|---|---|---|
| Kleckley No. 6 | 720 | 22.8 | 16,408 |
| Big Boy | 1136 | 17.7 | 20,112 |
| Tom Watson | 1312 | 21.1 | 27,760 |
| Thurmond Gray | 672 | 26.9 | 18,112 |
| Stone Mountain | 864 | 22.3 | 19,280 |
| Stone Mountain No.5 | 592 | 20.7 | 12,256 |

## SWEET POTATOES

Maryland Golden Sweet again produced the higest yield of marketable sweet potatoes. On these sandy soils the Maryland Golden Sweet has definitely established its superiority.

Porto Rico and Nancy Hall ranked second and third in yield, respectively.

It is interesting to note that Big Stem Jersey, from which Maryland Golden Sweet originated as a sport gave a much lower yield than its sport.

Vineland Bush gave a satisfactory field of uniformly small roots. The variety cannot be expected to be of importance in this locality.

Mameyita gave low yields. Roots were large, but few in number.

TABLE 7 - SWEET POTATO VARIETY TRIALS, SALISBURY, MARYLAND, 1937

| Variety | Yield No.1's (lbs.) | Yield No. 2's(lbs.) | Yield Culls (lbs.) | Total Yield (lbs.) |
|---|---|---|---|---|
| Maryland Golden Sweet | 405.0 | 35.5 | 18.0 | 458.5 |
| Porto Rico | 379.0 | 15.0 | 15.0 | 409.0 |
| Nancy Hall | 356.5 | 19.0 | 14.5 | 390.0 |
| Big Stem Jersey | 299.5 | 23.0 | 17.0 | 339.5 |
| Vineland Bush | 345.0 | 21.0 | 12.5 | 378.5 |
| Mameyita | 284.5 | 14.0 | 12.5 | 311.0 |

Data given are for four plots combined, a total area of .025 acre. Harvested October 21.

ACKNOWLEDGEMENTS

The following individuals and firms have kindly contributed seeds for these 1937 trials:

Ferry-Morse Seed Co., Detroit, Michigan

Peter Henderson Seed Co., New York, N.Y.

Landreth Seed Co., Bristol, Pa.

D.V. Burrel Seed Growers Co., Rocky Ford, Colorado.

Abbott & Cobb Seed Co., Philadelphia, Pa.

W.A. Huelsen, Univ. of Illinois, Urbana, Ill.

George Tait & Sons, Norfolk, Va.

Wiseman-Downs Seed Company, Baltimore, Md.

S.G. Younkin, Iowa State College, Ames, Iowa.

C.E. Steinbauer, U.S.D.A., Beltsville, Md.

M.N. Walker, Univ. of Florida, Leesburg, Va.

Associated Seed Growers, New Haven, Conn.

W. Atlee Burpee Co., Philadelphia, Pa.

Corneli Seed Co., St. Louis, Missouri.

The following firms furnished fertilizer, lime or insecticides for use on the demonstration plots:

Fertilizer furnished by:

W.B. Tilghman Co. (J.L. Morris), Salisbury, Md.

Farmers & Planters, (Howard Ward), Salisbury, Md.

Peerless Fertilizer Co.( V.V. Hughes, Manager), Salisbury, Md.

Valliant Fertilizer Co. (Chas. Hayman, Manager), Laurel, Delaware.

Baugh Fertilizer Company, (Frank Brown), Baltimore, Maryland.

Lime furnished by:

H.E. Millard Lime Company ( through Wicomico Co. Farm Bureau), Annville, Pennsylvania

Warner Lime Co., (Robert Bunting, Mgr.), Wilmington, Delaware.

Rotenone dust for insect control furnished by:-

Mechling Bros., Camden, N.J.

Sherwin Williams, Baltimore,Md.

SOUTHEASTERN IOWA AGRICULTURAL EXPERIMENT ASSOCIATION

Cooperating with:
Iowa State College Extension Service
Iowa Agricultural Experiment Station

Sales office:
Conesville, Iowa

1938 Spring Circular
Certified Wilt-Resistant Watermelon Seed

IMPROVED KLECKLEY SWEET NO. 6 - Wilt-resistant

The Improved Kleckley Sweet No. 6 has proved to be the most outstanding wilt-resistant watermelon variety yet released for commercial production. The 1937 acreage was conservatively estimated as ten times as great as the 1936 acreage. The 1938 acreage will likely show an even greater increase.

The success of No. 6 is largely attributable to its very high quality, productivity and large size. The fruits have the typical outside markings of Kleckley Sweet or Monte Cristo, with the possible exception that the rind has a tendency to be slightly more rough. The rind is thin, but sifficiently tough to make it an excellent shipping variety. The flesh has a desirable red color and is firm enough to stand rough handling, yet it is crisp and free from strings or coarse veins. Under favorable conditions the fruits will average 26 to 30 pounds.

The variety like nearly all other long-fruited varieties has a tendency to produce bottle-necked fruits under poor growing conditions. The fruits generally mature about one week later than the earliest Kleckley Sweet selections, however, certain sections have reported maturity as early as Improved Stone Mountain No. 5.

See next page for prices and shipping information.

HAWKSBURY - Wilt-resistant

We are able to offer for the first time seed of the new Thurmond Grey type watermelon developed in Australia and known as Hawksbury. This variety has been under observation in Iowa for the past two years and has shown definite promise of becoming a standard wilt-resistant variety in sections demanding a grey-rinded watermelon.

The Hawksbury produces long, grey fruits which have a thin, tough rind. Bottle-necked fruits have very rarely been observed. The flesh is red, firm and equal to the Thurmond Grey in quality. The seeds are medium-sized and nearly black. Mature fruits, under favorable conditions, will weigh as much as Improved Kleckley Sweet No. 6 fruits. The variety has the essential qualities of a desirable shipping and all purpose watermelon.

See next page for prices and shipping information.

IMPROVED STONE MOUNTAIN NO. 5 - Wilt-Resistant

This variety has proved to be most desirable for growers needing a wilt-resistant, round watermelon of the Stone Mountain or Dixie Belle type. It is considerably earlier than the regular watermelon varieties, such as Dixie Queen, Early Kansas and Dixie Belle. The rind is moderately thick, tender and dark green. It requires more care in handling then Improved Kleckley Sweet No. 6. Under normal conditions the fruits will average 25-28 pounds. This variety is particularly adapted to local market and home use.

The principal shortcoming of the Improved Stone Mountain No. 5 is the short period in which it remains prime and, like other early varieties, the flesh soon becomes mealy. Usually less than 1 per cent of the fruits have a white rind representing one of the original parents.

SEED PRICES ON ALL INTRODUCTIONS

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|---|---|
| ½ pound | $0.80 |
| 1 pound | 1.50 |
| 5 pounds | 1.25 per pound |
| 10 pounds | 1.00 per pound |

Mail your orders promptly. Our supply of all items is limited. One-half purchase price will reserve your order. Shipment will be made upon receipt of balance. Shipment will be made C.O.D. where one-fourth of remittance accompanies order.

All orders will be filled immediately and shipped prepaid. No orders will be filled for less than one-half pound.

Checks, money orders and drafts should be made payable to Southeastern Iowa Experiment Association.

Kindly use attached order blank.

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Hal C. Wolford--Sales Agent
SOUTHEASTERN IOWA AGRICULTURAL EXPERIMENT
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Conesville, Iowa

Date_____193_____

Your Name_____

Postoffice_____

County_____State_____

St. or R. F. D. No._____

| LBS. | VARIETY | UNIT PRICE | TOTAL |
|---|---|---|---|
| | IMPROVED KLECKLEY SWEET NO. 6 | | |
| | IMPROVED STONE MOUNTAIN NO. 5 | | |
| | HAWKSBURY | | |
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| | | TOTAL | |

Shipping Directions--(Check one)

Reserve_____ Ship Immediately_____

Ship C.O.D._____

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Date_____193____

Your Name_____

Postoffice_____

County_____State_____

St. or R. F. D. No._____

| LBS. | VARIETY | UNIT PRICE | TOTAL |
|---|---|---|---|
| | IMPROVED KLECKLEY SWEET NO. 6 | | |
| | IMPROVED STONE MOUNTAIN NO. 5 | | |
| | HAWKSBURY | | |
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Reserve_____ Ship Immediately_____

Ship C.O.D._____